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## Does Climate Change Alter the Agenda for the Bottom Billion?

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Climate change will make the plight of the Bottom Billion even worse, being both an economic development issue and now a global security concern. Paul Collier does not highlight climate change but it is likely to impact the Bottom Billion, exacerbating the development traps in which they are caught. This is not just a problem for the Bottom Billion, however, and as such climate change is attracting significant attention. The climate problems of poor and marginalised groups can be addressed only as part of a post-Kyoto, global deal on a complex international agreement, with a balance of regulatory frameworks, technical support and assistance, market incentives and the involvement of all players.

### Climate change: A problem for all

Climate change is very much a development issue. Unless it is tackled, its impacts could mean losses of at least five per cent of global GDP each year, and possibly as much as 20 per cent (Stern 2007). Furthermore, extreme events could cause sudden shocks, which create downward ratchets for those on the margins and increase the risk of violent conflict in unstable areas (Smith and Vivekananda 2007) – one of Collier's four development traps set out in *The Bottom Billion*. The Bottom Billion are on the front-line in terms of exposure to the direct impacts of climate change on their own livelihoods, while having the least resources with which to cope and a restricted potential for opportunities to move out of poverty. Moreover, they have not created the problem.

### Collier and climate change

Climate change does not feature in Paul Collier's analysis in *The Bottom Billion*. But Collier's assessment cuts directly across critical climate change issues. The differentiation in development trends Collier identifies between the Bottom Billion and the newly-industrialising developing countries has already been marked as a potential blockage to delivery of an international climate regime. Rapid development in some countries with large populations is shifting patterns of greenhouse gas emissions to such an extent that all major emitters, including China and India, need to be involved in an international regime in the next 15–30 years, even assuming that industrialised countries take full responsibility for already accumulated atmospheric stocks.

Nonetheless, the international community seems committed to ensuring that the poor and most vulnerable who live in all areas susceptible to climate problems and who have weak adaptive capacity to cope with the impacts do not suffer the most. International cooperation to support urgent implementation of adaptation actions is a part of the Bali Action Plan agreed in December 2007. While Collier's agenda for action does not relate directly to climate change, his package of possible international interventions mirrors the route currently under exploration for the environment. Also his analysis of how things currently don't work, for example on the timing and packaging of technical assistance and aid, could inform those devising climate solutions.

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Significantly, there are overlaps between Collier's Bottom Billion argument and areas and sectors identified as being especially vulnerable to climate change by the Intergovernmental Panel on Climate Change (IPCC 2007a) and identified as requiring special treatment under the UN Framework Convention on Climate Change (UNFCCC). But the developmental impact of climate change reaches far beyond the boundaries of the Bottom Billion countries.

Globally, the ramifications of climate change may even become a security problem, with triggers such as water rights and migration. According to the recent report of the German Advisory Council on Global Change (WBGU):

...without resolute counteraction, climate change will overstretch many societies' adaptive capacities within the coming decades. This could result in destabilization and violence, jeopardizing national and international security to a new degree.  
(Schubert and Schellnhuber 2008: 1)

In all developing regions, crucial population centres and manufacturing capacity are located in vulnerable coastal regions which will be at greater risk from increased flooding from the sea and, in some mega-deltas, from rivers. Freshwater availability in large Asian river basins is expected to decrease by mid-century. Serious disruptions to agriculture caused by increased drought could weaken capacities to feed urban dwellers. Just to take the case of China as an example, a rise of just 30cm in sea level could inundate a large area (8,000km<sup>2</sup>) of the densely populated

and highly industrialised coastal region, and continuation of the trend of increases in the intensity and frequency of strong typhoons since the 1950s would add to these pressures (IPCC 2007a). Many inland regions, where 770 million people live, have inadequate access to education and health care provision and are threatened by desertification and glacial melt.

Geographically, therefore, even a list of the most vulnerable areas goes beyond the Bottom Billion. It includes countries that have small islands or low-lying coastal areas, are prone to natural disasters, are liable to drought and desertification, or have fragile ecosystems, including mountainous zones. Climate-critical regions of Africa, small islands, and Asian and African mega-deltas contain the vast majority of the world's poorest people.

## Target the poor, not the poorest countries

Within the international climate change negotiations there is now acceptance that engagement of emerging economies will only be achieved as part of a global deal on 'enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation' (UNFCCC 2007b: 3). As this would include China, India, etc. there is a tension here with Collier's wish to focus aid resources only on the Bottom Billion countries.

In international climate change discussions, the poor tend to be bundled together in a single group, and their vulnerability, adaptation needs and

capacity are contrasted to those of richer people. In part this comes from the need to highlight that climate change impacts and adaptation demands are generally more severe for the poorest groups in the world, wherever they may live. This climate discourse therefore challenges Collier's focus on the poorest countries and instead concentrates on the poor themselves.

In contrast to Collier's country focus, there have been calls to look beyond simple state-level analysis and towards vulnerable groups within countries, where their significance may be masked by overall state figures (Tanner and Mitchell 2008). Within countries, chronically poor people rely heavily on climate-sensitive sectors such as agriculture and fisheries, they are less able to respond to the direct and indirect effects of climate change due to limited assets and capacity, and they tend to be located geographically in marginal areas that are more exposed to climatic hazards, such as flood plains, or on nutrient-poor soils. Thus, a new focus for climate change adaptation policy is being advocated, focusing on differentiating poverty among groups of people, not countries, and embracing other ongoing policy initiatives, such as social protection measures that target the poorest groups of people.

## A new crisis and new opportunity

Climate change has become a transformative issue, stimulating political dialogues, new technologies, and innovative financing mechanisms. A central thrust of recent analytical work on climate change has been to link it

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with the mainstream development agenda (Sathaye and Najarn 2007; UNDP 2007). The shift in Bali in December 2007 by key developing countries toward engaging actively in discussion of a post-Kyoto regime suggests that their governments have recognised the bigger economic development and security issues. Climate change has the capacity to jeopardise the economic and poverty reduction gains they have made. Within this framework, the challenge will be to ensure that the Bottom Billion are not further disadvantaged, are adequately protected against the impacts of a problem they have not created, and benefit from financing mechanisms which may provide energy services and adaptation assistance for development.

Typically, the poorest countries have the lowest per capita greenhouse gas (GHG) emissions. For example, in 2004 Tanzania produced 0.1 tonnes of carbon dioxide (CO<sub>2</sub>) per person compared to the US emissions figure of 20.6 tonnes. Overall, it has been estimated that the poorest billion are responsible for only three per cent of the world's total carbon footprint (UNDP 2007). Thus there is no urgent need for reducing emissions in the Bottom Billion. But what is to be the nature of their future development?

Economic development pathways in industrialised, and now some developing, countries have been heavily carbon intensive. In the absence of a low carbon framework, traditional development solutions, such as export manufacturing, will exacerbate problems in Bottom Billion countries. In 2004, net exports from China accounted for 23 per cent of its carbon emissions (Wang and Watson

2007). Business as usual is not a pathway that can avoid dangerous human interference in the climatic system. Economic growth has driven emissions, yet stabilisation of GHG emissions in the atmosphere is feasible and consistent with economic growth (Stern 2007). Economic instruments, government funding and regulation are needed to create incentives for investments in low GHG products, technologies and services (IPCC 2007b). A global framework is vital to provide them.

In the absence of a global framework, however, the Bottom Billion's exports and economic development could be hit with trade barriers in developed countries. An example is the proposal that special tariffs be designed to ensure that countries, such as those in the EU, that price their carbon emissions are not put at a competitive disadvantage with countries that do not (*Financial Times* 2008).

Meeting the energy needs of the global poor in ways that provide for economic and social development is a long-standing problem, now with a climate change dimension. Some new impetus is now emerging with global action on climate change. While renewable energy technologies have been advocated since the first oil price hikes in the 1970s as the solution for rural development, success has been patchy despite considerable investments and aid programmes. Increased attention is now being given to this issue. Beneficiaries of the initial innovative Clean Development Mechanism have not been the group of Least Developed Countries (LDC), but China, India, Brazil, Mexico and Korea and most projects have been large

industrial ones covering the GHGs trifluoromethane (HFC23) and nitrous oxide (N<sub>2</sub>O). Creating opportunities to price the carbon embedded in land use and forestry systems are now being explored formally within the Climate Change Convention. Such projects could benefit all countries with low emission levels but with particularly great potential opportunities for GHG mitigation in regions such as Africa (Ellis and Kamel 2007).

### Financing climate adaptation and mitigation

Dealing with the costs of climate change in poor economies, although relatively low in terms of global GDP, will involve significant additional financial flows. The United Nations Development Programme (UNDP) Human Development Report on climate change estimated a cost of US\$ 86 billion per year by 2015 for adaptation alone, which would be in the vicinity of 0.2 per cent of developed country GDP. It has also been estimated that in 2030 additional flows for adaptation in developing countries alone could be US\$ 28-67 billion, while mitigation would cost between US\$ 200-210 billion, with a large share going to developing countries (UNFCCC 2007a).

Collier's Bottom Billion appear to be concentrated in countries which already receive some direct additional support to cope with climate change through the LDC Fund, established under the UNFCCC in 2003. The LDC group is also given some extra attention, for example, a seat on the new Board for the Adaptation Fund. The EU has also announced the development of a new

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Global Climate Change Alliance which will be funded from EU development funds and targeted on LDCs, Small Island Developing States (SIDS) and Africa. But these funds are widely criticised as being totally inadequate, if not derisory, and more provision is unlikely without a global package, including more innovative finance.

Of course, it is important that the finance and assistance provided for climate adaptation and mitigation is effective. In this regard, the debates that Collier has stimulated on the mechanisms for improving aid effectiveness are welcome.

## Robust and equitable solutions needed

Climate change and development linkages have already fostered significant activity addressing the needs of the Bottom Billion. To continue to do so requires robust and equitable climate change solutions, founded upon a renewed international agreement that prevents dangerous human interference with the global climate system, as well as further providing assistance for adaptation and mitigation. Concerned citizens are already putting pressure on corporations to cut their use of carbon. Some elements of global business are demanding government leadership and targets. Non-Governmental Organisations (NGOs) are very active and holding governments to account,

## Further Reading

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**Wang, T. and Watson, J.** (2007) *Who Owns China's Carbon Emissions?* Tyndall Briefing Note 23, Manchester: Tyndall Centre

**UNDP** (2007) *Human Development Report 2007/2008 Fighting Climate Change: Human Solidarity in a Divided World*, New York: UNDP

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**UNFCCC** (2007b) Bali Action Plan COP13, [www.unfccc.int/meetings/cop\\_13/items/4049.php](http://www.unfccc.int/meetings/cop_13/items/4049.php) (accessed 4 March 2008)

and also working globally in networks. The proclamation of international targets and standards has created a new carbon trading market and is slowly shifting behaviour, but there is a long way to go.

## Credits

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